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SDCS-ER-76-84

9 Technical rept.

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(SDCS)

SPECIAL DATA COLLECTION SYSTEM EVENT REPORT
NTS Event 'KEELSON', 84 February 1976.

10

K.D. Hill, M.S. Dawkins, R.R. Baumstark, and M.D. Gillispie
Alexandria Laboratories

Teledyne Geotech, 314 Montgomery Street, Alexandria, Virginia 22314

11 14 May 1976

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Monitored By
VELA Seismological Center
312 Montgomery Street, Alexandria, Virginia 22314

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SDCS EVENT REPORT NO. 84

NTS Event "KEELSON", 04 February 1976

Using SDCS stations and LASA, the epicenter location and magnitudes become *for 'KEELSON' Event are reported.*

Origin Time	Lat.	Long.	m_b	M_s
14:20:01.7	37.1N	116.0W	5.3	4.8

All SDCS stations were operational during this period.

The programs used for LASA, NORSAR and ALPA data recovery are presently undergoing modifications. Information for LASA short-period is reported from their Teleseism Event Report. The long-period array beam recovery for these stations will be resumed upon completion of these modifications.

Short-period signals associated with this event were recorded at all SDCS stations and LASA. CPSO short-period data were retrieved from the field station digital tape. All SP channels at HN-ME had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal SP channels at all SDCS stations were rotated.

Long-period signals were recorded at all SDCS stations. All LP channels at HN-ME and the LP radial channel at RK-ON had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal LP channels at all SDCS stations were rotated.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response).

ACCESSION for

NTIS	White Section	<input checked="" type="checkbox"/>
DUC	Self Section	<input type="checkbox"/>
UNANNOUNCED		<input type="checkbox"/>
JUSTIFICATION.....		
BY.....		
DISTRIBUTION/AVAILABILITY CODES		
Dist.	AVAIL. CODE/SPECIAL	
A		

STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES		ELEVATION METERS	INSTRUMENTATION	
		DEG	MN SECS		SHORT-PERIOD	LONG-PERIOD
ALPA	Alaska	65 14	00.0 N 147 44 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35	41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32	58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41	19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09	43.0 N 067 59 09.0 W	213	KS36000	KS36000
NORSAR	Kjeller, Norway	60 49	25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50	20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41	41.0 N 134 58 02.0 W	853	18300	SL210 V SL220 H

Note: The orientation of the radial instruments at FN-WV is assumed to be $16^\circ + 5^\circ$ based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

HYPOCENTER DETERMINATION

INPUT FOR EVENT 4 FEB 76
14:20:00.0 37.000N 116.000W 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CALC	REST		
LAD	14 22 53.5	0.1	0.3	12.0	34.2
RK-ON	14 24 45.8	-0.2	-0.4	21.0	42.2
CPSO	14 25 21.9	0.0	0.2	24.5	84.3
WH2YK	14 25 39.6	-0.0	0.0	26.5	339.0
FN-WV	14 26 00.0	-0.2	-0.2	28.7	75.9
HN-ME	14 27 08.1	0.3	0.0	36.5	60.3

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
14:20:07.0	37.245N	115.936W	33. CALC	0.2	3	6
14:20:01.7	37.123N	116.018W	0. REST	0.3	2	6

CALC				REST			
1	.	0		1	.	0	
0	.	0		0	.	0	
0	0	3	2	0	0	3	2
.
0	0	0	0	0	0	0	0
0	.	0		0	.	0	
0	.	0		0	.	0	

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 1.79
MAJOR 68.2KM. MINOR 41.1KM. AZ= 35 AREA= 8812 SQ.KM. REST

DATA SUMMARY

INPUT FOR EVENT 4 FEB 76
14:20:00.0 37.000N 116.000W 0KM.

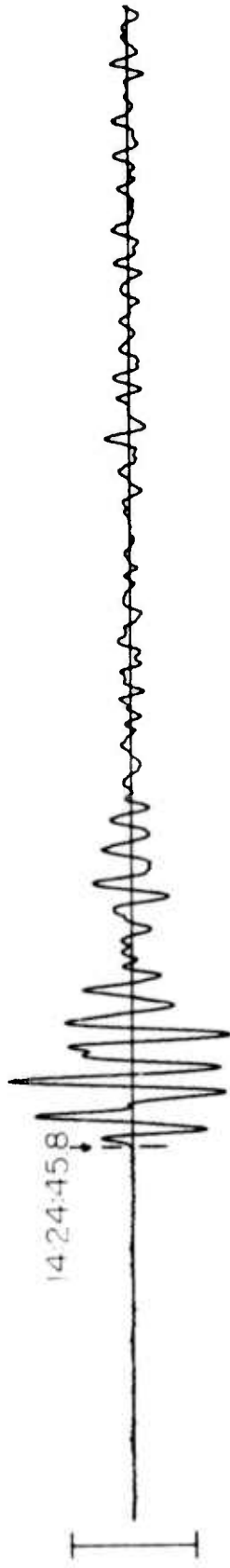
STA.	PHASE	ARRIVAL		INST	PER	A/T	MAGNITUDE		DIR	DIST
		TIME					MB	MS		
LAO	EP	14 22 53.5		SAB	99.9	9999.				
RK-ON	EP	14 24 45.8		SPZ	1.0	1038.	5.82			21.0
RK-ON	LR	14 33 30.0		LPZ	14.0	110.		4.48		21.0
CPSO	EP	14 25 21.9		SPZ	1.0	343.	5.64			24.5
CPSO	LR	14 35 17.0		LPZ	16.0	230.		4.87		24.5
WH2YK	EP	14 25 39.6		SPZ	1.1	67.	4.97			26.5
WH2YK	LQ	14 34 40.0		LPT	22.0	34.				
WH2YK	LR	14 37 02.0		LPZ	16.0	136.		4.68		25.5
PN-WV	EP	14 26 00.0		SPZ	0.8	25.	4.70			28.7
PN-WV	LQ	14 35 38.0		LPT	25.0	42.				
PN-WV	LR	14 37 43.0		LPZ	18.0	167.		4.80		28.7
HN-ME	EP	14 27 08.1		SPZ	1.0	152.	5.43			36.5
HN-ME	LQ	14 39 54.0		LPT	17.0	77.				
HN-ME	LR	14 42 18.0		LPZ	18.0	128.		4.79		36.5

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LPNAG	LPSDV	LPSTA
14:20:07.0	37.245N	115.936W	33. CALC	5.28	0.49	5	4.79	0.0	2
14:20:01.7	37.123N	116.018W	0. REST	5.31	0.47	5	4.80	0.0	2

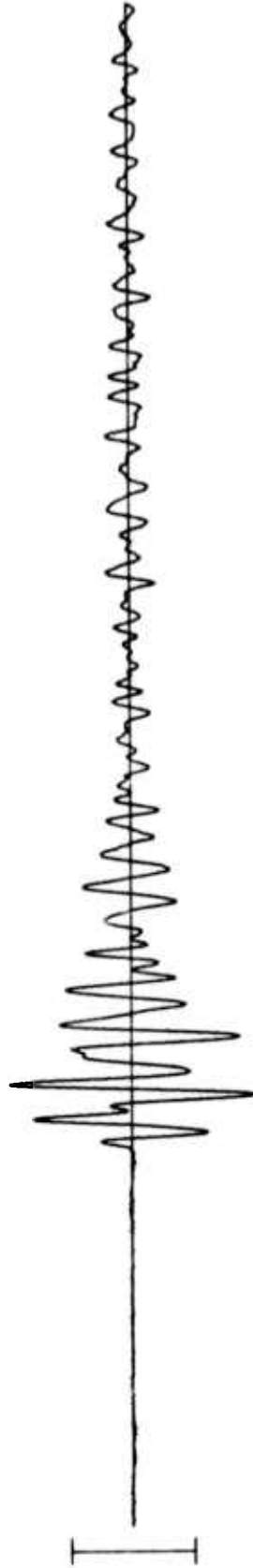
Average long-period magnitude (M_S) is based on Rayleigh wave observations in the period range of 17 to 23 seconds per cycle.

RK-QN 04 FEB 76

SPZ
610.23 MU



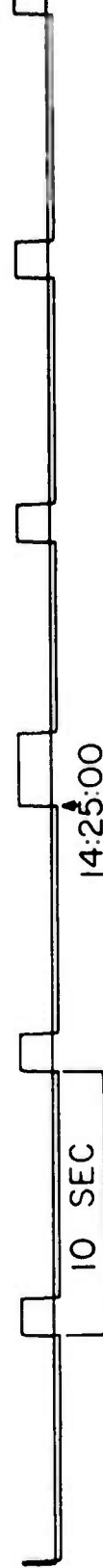
SPR
408.29 MU



SPT
84.89 MU

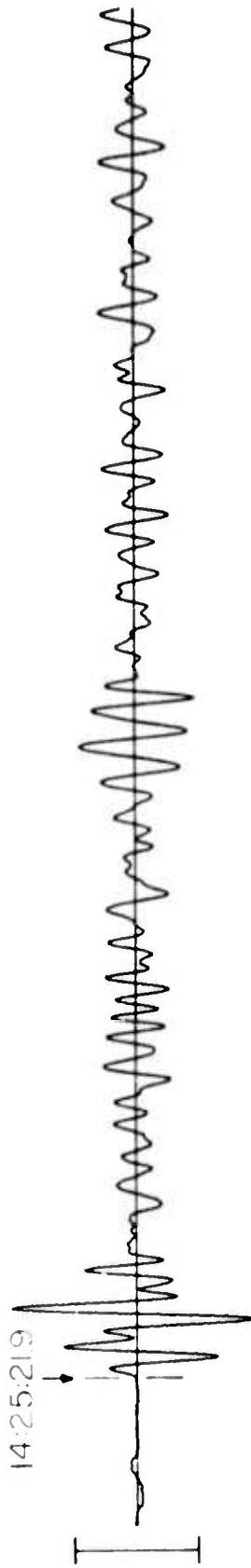


TIME

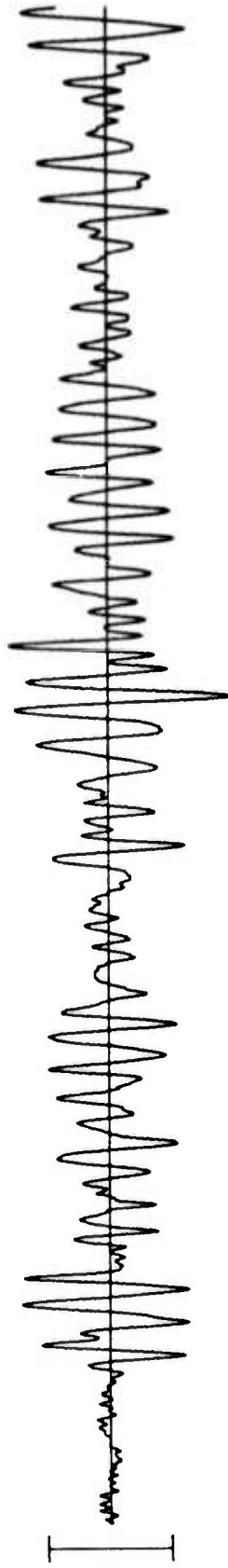


CPSO 4 FEB 76

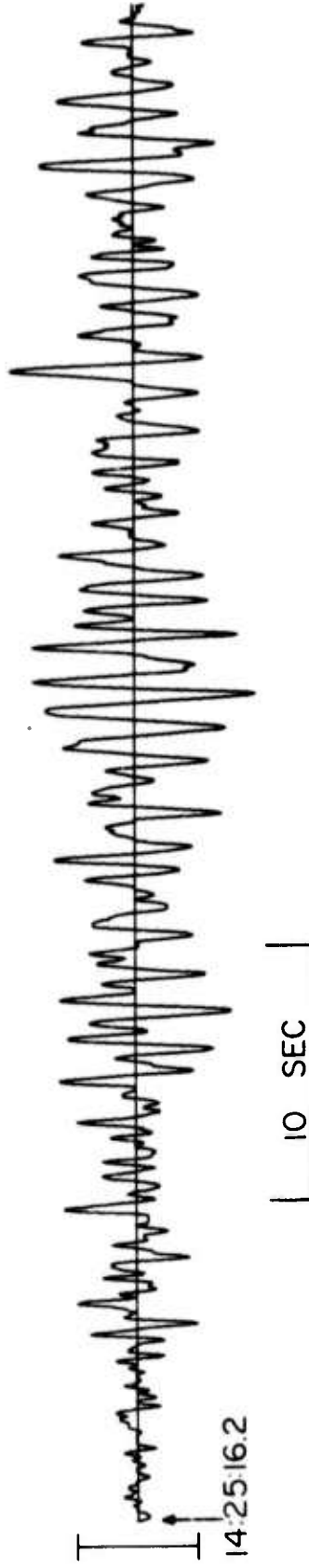
SPZ
178.00 MU



SPR
45.00 MU



SPT
29.00 MU

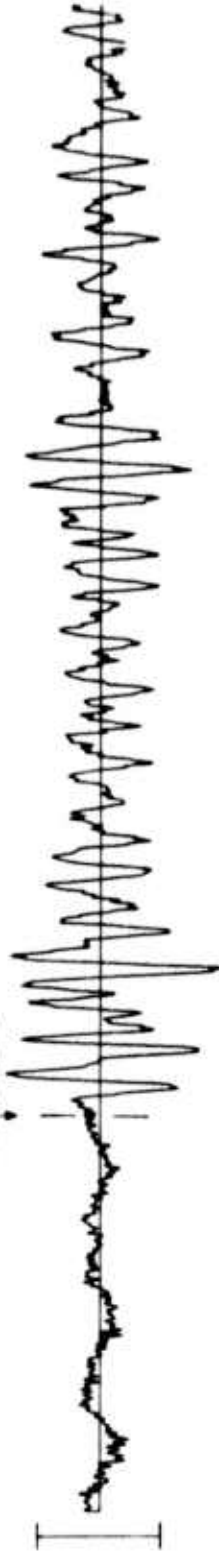


10 SEC

WH2YK 04 FEB 76

SPZ
33.06 MU

1425396



SPR
17.70 MU



SPT
15.54 MU

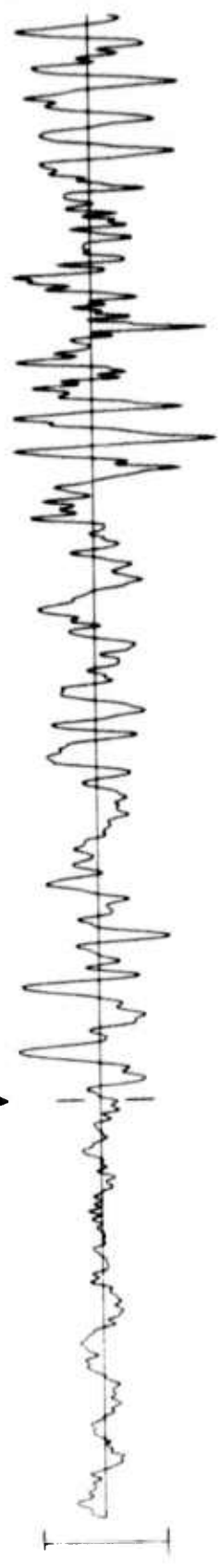


TIME

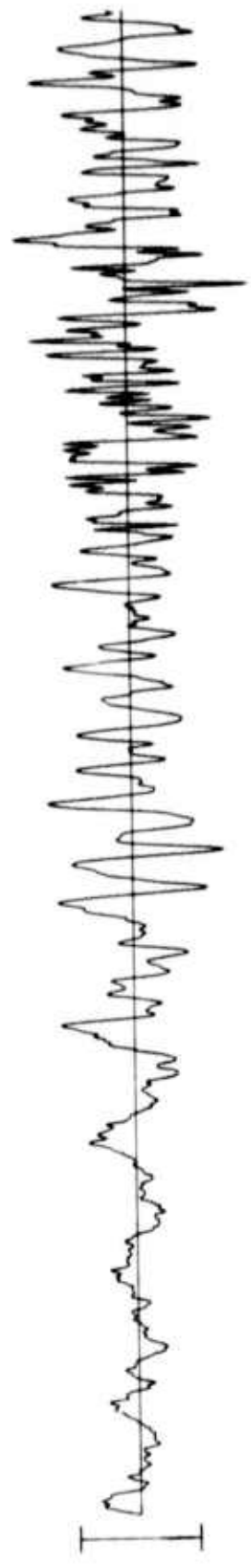


FN -WV 4 FEB 76 14:26:00.0

SPZ 35.43 MU



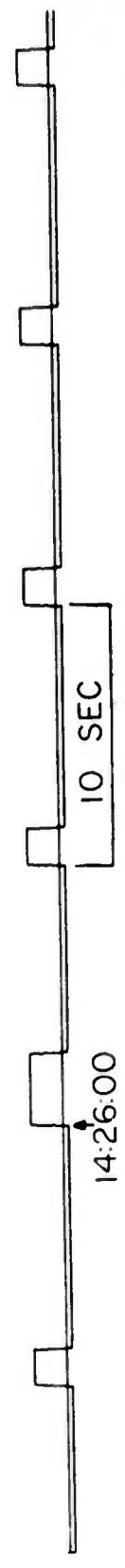
SPR 22.55 MU



SPT 26.45 MU



TIME



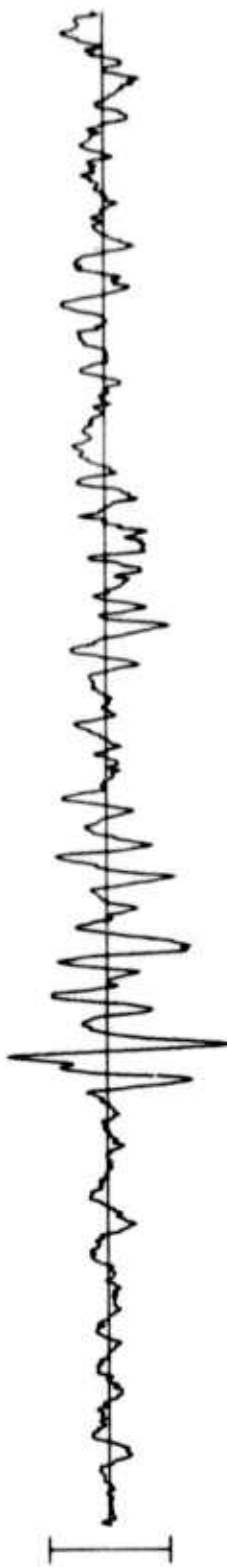
HN-ME 4 FEB 76

14:27:08.1

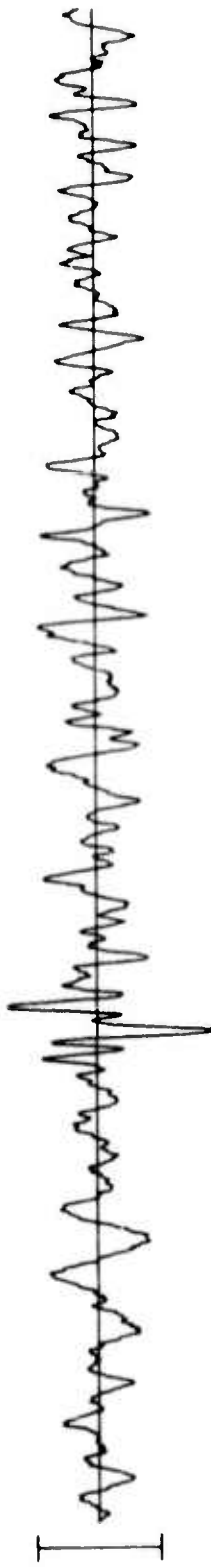
SPZ
80.61 MU



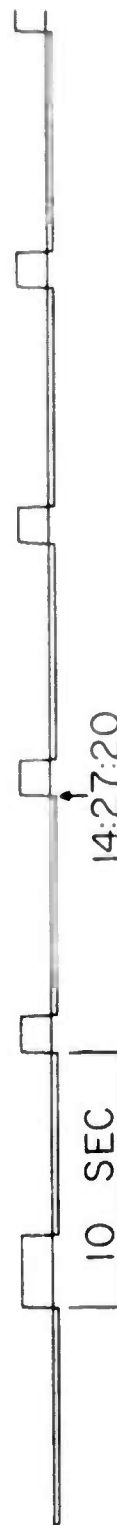
SPR
66.72 MU



SPT
43.69 MU



TIME



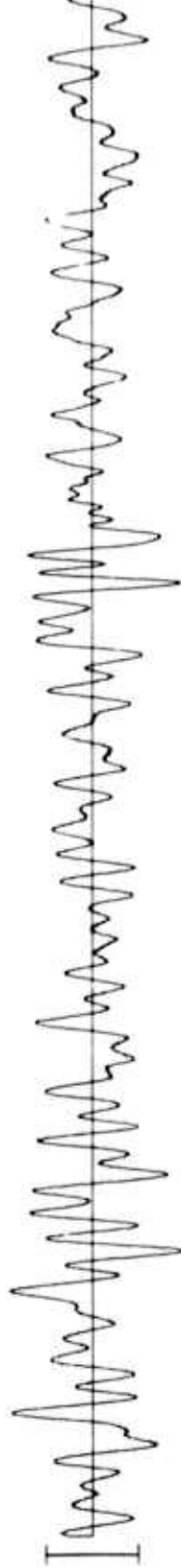
RK-ON 4 FEB 76

14:33:30

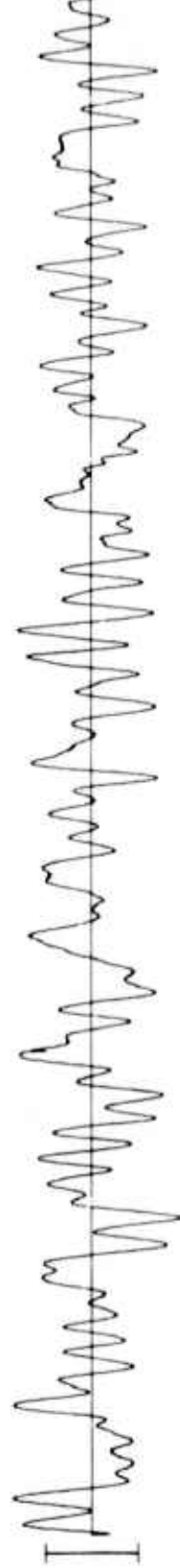
LPZ
905.72 MU



LPR
761.99 MU



LPT
217.40 MU



TIME



2 MIN

14:30:00

CPS0 4 FEB 76

LPZ
1347.83 MU

14:35:17

LPR
1113.22 MU

POSSIBLE "LQ"
14:33:32

LPT
444.16 MU

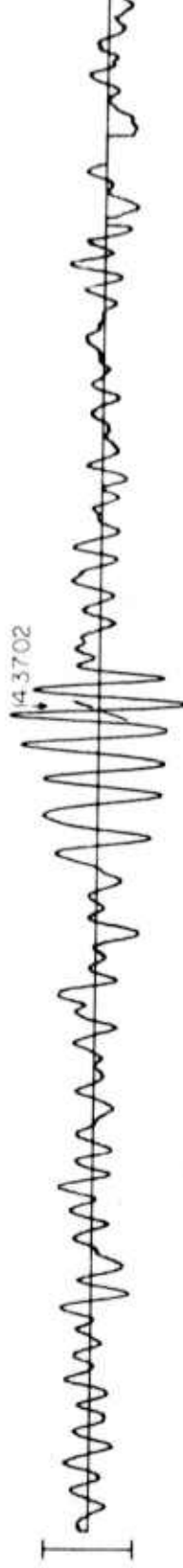
TIME

2 MIN

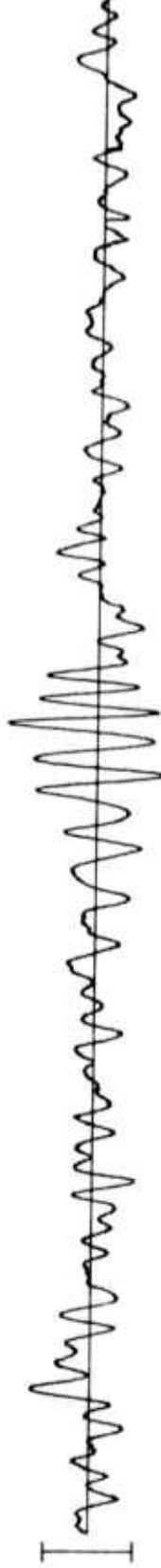
14:30:00

WH2YK 4 FEB 76

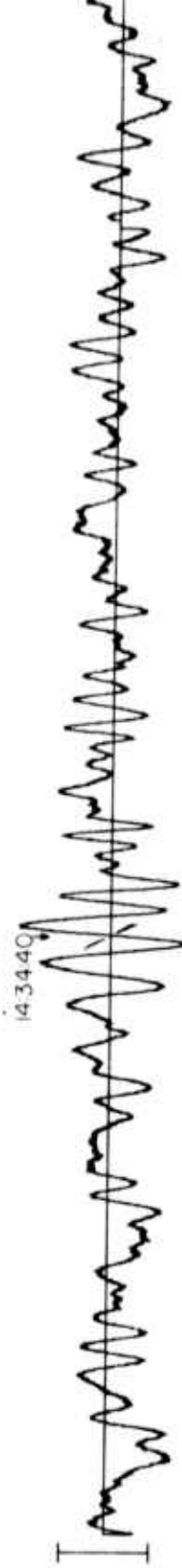
LPZ
773.54 MU



LPR
657.59 MU



LPT
466.47 MU

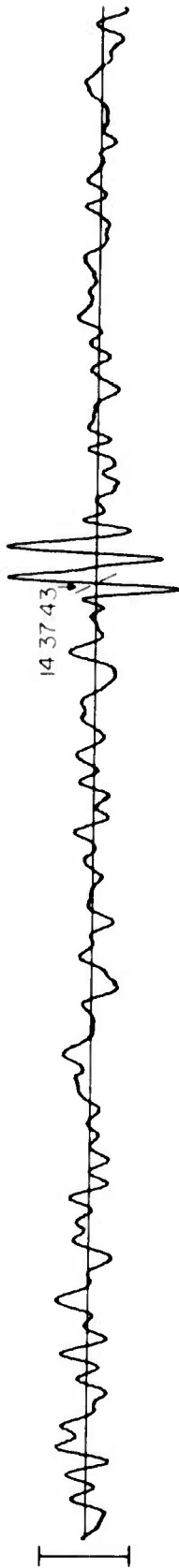


TIME

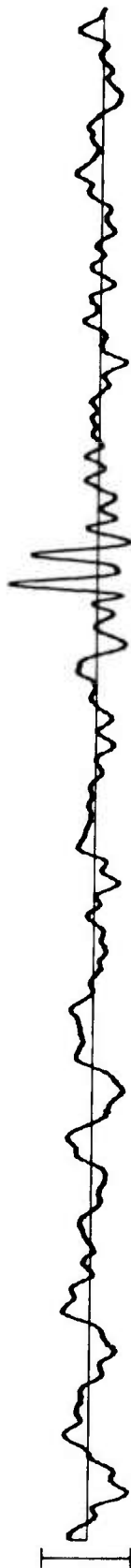


FN-WV 4 FEB 76

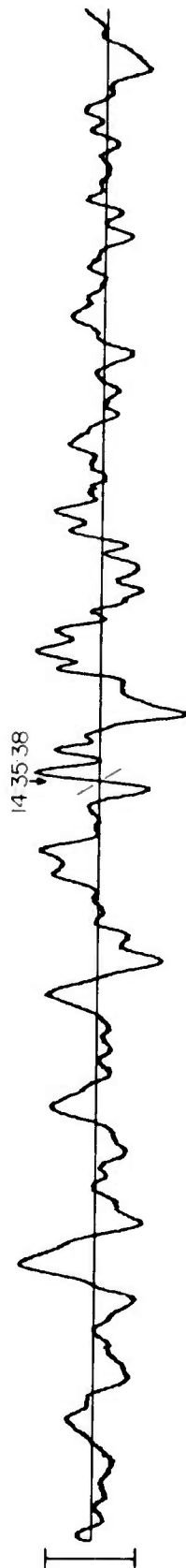
LPZ
1214.95 MU



LPR
1401.75 MU



LPT
844.40 MU



TIME



HN-ME 4 FEB 76

LPZ
1115.52 MU

14:42:18

LPR
837.44 MU

14:39:54

LPT
626.09 MU

TIME

2 MIN

14:40:00